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# DESCRIPTIONS OF NEW MEMBRACIDÆ FROM MEXICO[1]

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Very little concerning the Membracidæ of Mexico has appeared in the literature since Canon Fowler's monumental work was published. (Biol. Centr. Amer., Rhynch. Homop., v. 2, pt. 1, 339 pp., illus. 1894–1909.) This is the first of a series of papers in which the author hopes to add to our knowledge of this group in Mexico. It will be noted that the types, allotypes, and many of the paratypes are now in the collection of the author. They will eventually be deposited in the United States National Museum.

**Ceresa mexicana** new species. (Figs. 1–4)

Dark brown with black punctuations on suprahumeral horns and along each side of pronotum near dorsal ridge. Suprahumerals very heavy, not recurved. Apical third of tegmina smoky. Close to *vacca* Fowler, as judged from his figure. Length, 12 mm.; width between suprahumerals, 7 mm.

Head finely sculptured; ocelli nearer to each other than to the eyes; base arcuate.

Pronotum with suprahumeral horns heavy, long, straight, rounded at apex, extending forward well beyond face, upward to a point well below highest part of dorsum, laterally in an almost horizontal plane when viewed from the front, three definite sides, the posterior and lateral ones flat, the dorso-

[1] The author is greatly indebted to Dr. W. D. Funkhouser for his review and criticism of the manuscript.

cephalic one gently rounded; metopidium straight; flattened area between bases of suprahumerals; dorsum high, evenly and gradually rounded, sides tectiform, terminating in a long terminal process that sometimes extends past apex of fifth apical cell of tegmina; ventral margin of pronotum a long perfect arc from above first abdominal segment to apex of terminal process; uniformly, not rugosely, punctate.

Color dark brown, when well illuminated appearing reddish brown, and under magnification light brown with small reddish-brown markings or, sometimes, reddish brown with light-brown markings; black punctations on suprahumeral horns and along each side of pronotum near dorsal ridge; reddish-brown ridge separating posterior and lateral sides of each suprahumeral horn. Thorax and legs light brown. Abdomen dark brown and black. Tegmina hyaline, apical third smoky.

Type, ♀, Tenancingo, State of Mexico, October 22, 1933.

Allotype, ♂ (similar), Cuernavaca, Morelos, October 8, 1933. Described from 1♀ and 6♂♂ taken at type localities by author. Type, allotype, and 4♂♂ paratypes in author's collection; 1♂ paratype in collection of W. D. Funkhouser. Taken on oak (*Quercus* sp.) in Cuernavaca.

Fowler described and figured *C. vacca* from Guerrero. (*Ibid.*, p. 106, tab. vii, figs. 14–14a.) His figure 14 indicates that the suprahumerals rise above the crest of the pronotum, but in figure 14a they are much lower. Since his description was based on a single specimen, his drawings must have been made from it. From the drawings and the description it is possible to separate *mexicana* from *vacca,* but they are very close. Funkhouser has determined as *vacca* a more common species of *Ceresa* taken by the author in several localities in Mexico. He had compared some of his material with that in the British Museum and the Paris Museum and was quite confident of his determination. This *vacca* has much shorter horns than the species figured by Fowler and the present author. The horns of this species, when viewed from the side, project forward only a short distance and scarcely interrupt the dorsal line of the pronotum.

Since there may be some difficulty in separating these species, the male genitalia of *mexicana* are illustrated (Fig. 4). The striking feature is the extreme length of the aedeagus, extending to or above the rectum. In *vacca* it is shorter. The hook on the apex is usually not so definite and prominent in *vacca.* When the aedeagus of *mexicana* is viewed from behind, the sides are straight

except at the apex, where the hook is located. At that point the aedeagus is narrower. In *vacca* it is wider just before the apical hook and a wide transparent central area is to be seen at that point. A similar transparent area is visible in *mexicana,* but it is much narrower. Near the base of the aedeagus (viewed from behind) there is another widened area with no transparent central area and sometimes a spine on each side above it. In *mexicana* the base is straight-sided. The styles are usually much heavier and darker than in *vacca.*

**Poppea longicornis** new species. (Figs. 5–7)

Cream to faded brown, sometimes yellow with light or dark brown markings. Long, heavy, recurved suprahumeral horns, with small space between them at their bases on dorsum of pronotum. Lateral processes of terminal trifurcate process very heavy, forming right angle with each other. Readily distinguished from *formosa, concinna, affinis,* and *munda* group by these pronotal characters. Very close to *rectispina* Fairmaire, but differing in having hairs on the pronotal disk, by black markings, and by smaller size. Length, 8 mm.; width between tips of suprahumeral horns, 4 mm.

Head smooth, shining, nearly three times as broad as long; ocelli nearer to eyes than to each other; base arcuate.

Pronotum with small node at base above each eye; metopidium almost straight; suprahumeral horns very close together, a narrow space between them on dorsum, subovate, massive basal half extending upward, outward, and sometimes slightly forward, distal half smaller, recurved, acuminate; dorsal elevation behind suprahumerals triangularly indented in front, constricted in front of enlargement bearing terminal trifurcate process; small node on each side below mid-dorsal enlargement; trifurcate process with long middle process, decurved, tip pointed, outer processes forming right angle with each other, slightly decurved, very heavy, subovate on basal two thirds, apical third much smaller, round, acuminate; punctate, large shallow punctations on sides from behind suprahumerals to front of enlargement in front of trifurcate process.

Color cream to faded brown throughout, sometimes bright yellow with light or dark brown markings and with dull brown abdomen. Pronotum pellucid where large punctations occur; extreme tips of suprahumerals and terminal processes black; numerous long black and yellow hairs on all parts of pronotum except nodes above eyes, humeral angles, and vicinity of large punctations. Small black spot on lateral margin of face below each eye; black spots near spiracles on fourth and fifth abdominal segments. Tegmina hyaline; veins cream to faded brown, sometimes yellow and dark brown.

Type, ♀, Cuernavaca, Morelos (5,050 ft.), November 29, 1931.

Allotype, ♂ (similar), same locality, November 22, 1931. Described from 8♀♀ and 2♂♂ from type locality and 1♀ from Coatepec, Vera Cruz. Type, allotype, 7♀♀ paratypes, and 1♂ paratype in author's collection; 1♀ paratype in collection of W. D. Funkhouser.

**Antonae evelyna** new species. (Figs. 8–10)

Pronotum usually cream and tinged with light brown and light green, sometimes light brown with cream-colored spots. Eight nodes on pronotum, the one in middle of dorsum much higher than others. Tegmina usually hyaline. Distinguished from *nodosa* Funkhouser and *bulbosa* Funkhouser by height of mid-dorsal node. Length, 6.5 mm.; width between tips of horns, 3.5 mm.

Head smooth, shining; ocelli nearer to eyes than to each other; base straight.

Pronotum with small node above each eye and in front of humeral angles; large suprahumeral nodes extending backward below front half of mid-dorsal node, usually slightly elevated above dorsum of pronotum in front of mid-dorsal node, each bearing an acuminate spine, projecting upward and backward; mid-dorsal node higher than suprahumeral nodes and node at base of terminal process; small node on each side below posterior half of mid-dorsal node; node in front of terminal process large, inflated, a deep semicircular impression on each side at attachment of terminal spine; terminal spine heavy at base, distal half attenuate, not straight; punctate, large shallow punctations in depressions between mid-dorsal node and caudal portions of suprahumeral nodes and nodes below mid-dorsal node, especially prominent at anterior constriction of node in front of terminal process.

Color of pronotum usually cream throughout, with faint light-brown markings, sometimes tinged with light green; sometimes light brown predominating and marked with irregular cream-colored patches; extreme tips of suprahumeral horns brown or black; extreme tip of terminal spine black; long light-brown and black hairs on all parts of pronotum except on nodes above eyes, humeral angles, nodes below mid-dorsal node, and depressions between nodes. Head, body, and legs cream to light brown; few black spots on face; legs marked with black spots, never appearing as rings. Tegmina hyaline throughout; venation cream to light brown, sometimes a few veins marked with dark brown.

Male: Pronotum always glossy light brown with cream and yellow markings, which predominate on nodes on sides of pronotum. Head, under surface of body, and parts of legs usually bright yellow; tibiae and tarsi light brown. Wing venation darker than in female. In other respects entirely similar to female.

Type, ♀, Cuernavaca, Morelos, October 15, 1933.

Allotype, ♂, Jiutepec (Xiutepec), Morelos (5,050 ft.), October 2, 1932.

Twenty ♀♀ and 9♂♂ paratypes from same localities. Two ♂♂ and 3♀♀ paratypes in collection of W. D. Funkhouser; others in collection of author. Described from 32♀♀ and 20♂♂.

The genus *Antonae* includes some species with six nodes on the pronotum and some with less. *A. evelyna* would probably come under that group having six nodes, such as *nodosa* and *bulbosa,* but the author feels justified in adding the small node above each eye, thus bringing the total to eight.

**Parantonae ornata** new species. (Figs. 11 and 12)

In general shape similar to *dipteroides* Fowler, but easily distinguished from that and other species of the genus by its basal cream color and mottled reddish-brown markings. Length, 9 mm.

Head smooth, shining, not punctate; three times as wide as long; base faintly arcuate; ocelli slightly nearer to each other than to the eyes, situated below a line drawn through centers of eyes; inferior margins of genae straight; clypeus deflexed, extending more than half its length below inferior margins of genae.

Pronotum punctate; humeral angles prominent, blunt, extending laterad much beyond the eyes; metopidium very sloping and rounded on sides; round lateral swelling on each side of mid-constriction extending laterad beyond lateral margins of cephalic half of pronotum, but not so far laterad as humeral angles; no rounded elevation on dorsum of posterior part of cephalic half of pronotum in front of constriction, as in *dipteroides.*

Color basal cream throughout, with uniform reddish-brown markings on head, pronotum, thorax, base of tegmina, and legs. Tip of pronotal spine, parts of veins of tegmina, femora, and parts of tibiae of third pair of legs, and base of ovipositor black; eyes dark brown, almost black; ocelli yellow with adjacent black spots. Few short yellow hairs on pronotum.

Type, ♀.

Described from 1♀ collected by the author at Cuernavaca, Morelos, September 9, 1933. In collection of author.

**Xolonia** new genus.

Short, subconical suprahumeral prominences, usually bluntly pointed behind humeral angles, points extending laterad but not attaining apices of these angles. Suprahumeral prominences usually elevated slightly higher than cephalic third of dorsum. Large mid-dorsal expansion behind suprahumeral prominences and higher than the latter, strongly depressed in front by percurrent carina, weakly depressed thereafter. Bulbous expansion

on each side of mid-dorsal enlargement. Dorsolateral constriction behind mid-dorsal enlargement and in front of terminal process. Terminal process swollen, trispinose, the middle process much longer than the two lateral ones. Scutellum concealed; tibiae not dilated, posterior tarsi not reduced; tegmina membranous, third apical cell stylate, venation like that of *Clepsydrius constrictus* Fowler.

Type, *Xolonia variegata* new species.

One male specimen taken by Alfonso Dampf at a trap light in Tetela del Rio, Guerrero, has sharply pointed suprahumeral prominences, and these prominences are not elevated above the cephalic third of the dorsum. Thirty-six specimens from Cuernavaca, Morelos, and Oaxaca, Oaxaca, have bluntly pointed suprahumeral prominences that are elevated above the cephalic third of the dorsum.

This genus appears to stand between *Clepsydrius* Fowler and *Antonae* Laporte. It is very close to the former in many respects. The terminal process is the same as in *Clepsydrius,* but in most specimens it is not inflated quite so much. It can readily be distinguished from that genus by other pronotal characters.

Fowler described the genus *Clepsydrius* from a single specimen in which part of the middle spine of the trispinose process was missing. (*Ibid.*, p. 95, tab. vii, figs. 1–1a). Since a comparison is made with his type species, it can be said that he very closely estimated the length of the broken spine as shown in his figure. These spines are similar to those of *Xolonia* and are tipped with black, the middle spine also having a black band at the middle in specimens from Acapulco, Guerrero. One dark-brown specimen from an unkown locality in Mexico has brown trispinose markings.

**Xolonia variegata** new species. (Figs. 13–15)

Varying in color from dark brown to black with dark-brown markings. Distinguished from *Clepsydrius constrictus* Fowler by suprahumeral prominences. Length, 5.25 to 6 mm.

Head three times as wide as long, shining, not punctate, not pubescent, few hairs on face; clypeus extending below inferior margins of genae for slightly more than half its length, hairy; base straight; attachment of eyes not straight as in *Clepsydrius constrictus* and *Cyphonia clavata* Fab.; ocelli same distance from each other as from the eyes.

Pronotum coarsely punctate, largest punctations on middle third; usually well covered with long hairs except on latero-posterior parts of supra-

humeral enlargements; with bulbous expansions on each side of mid-dorsal enlargement and a constriction in front of terminal enlargement; spines of trispinose terminal process not acuminate, outer ones usually pointed and slightly curved laterad, middle one pointed at apex and slightly decurved, usually, but not always, extending well beyond tip of abdomen.

Color varying so much from light brown to black as to be of little value as a character. All specimens with dirty yellow translucent trispinose terminal processes, the extreme tips usually black, sometimes dark brown; the middle spine usually banded at middle with black or dark brown. Tegmina hyaline, veins light brown, those from Cuernavaca with discoidal area dark brown to black; five apical and three discoidal cells. Wings with four apical cells.

Type, ♀, Oaxaca, Oaxaca (about 5,000 ft.), September 16, 1933. Allotype, ♂ (similar), from same locality. Taken by author at ruins of Monte Alban. Described from 9♀♀ and 2♂♂ from type locality; 13♀♀ and 12♂♂ collected by W. E. Stone at Cuernavaca, Morelos, and 1♂ taken at a trap light at Tetela del Rio, Guerrero, by Alfonso Dampf. Two ♀♀ and 2♂♂ paratypes in collection of W. D. Funkhouser; remainder, 31 paratypes, in collection of author.

**Publilia erecta** new species. (Figs. 16–18)

Light to dark brown with white or cream markings; female with erect horn on pronotum, male with no horn; pronotum wider from dorsum to venter at middle than in *porrecta* Fowler; only one discoidal cell in tegmina. Length, 5 mm.

Head typical of genus.

Pronotum with erect horn straight or nearly straight above head, apex of horn rounded or almost a right angle in front, almost a right angle in back; mid-dorsal depression behind horn followed by slight convexity and abrupt straight line to apex; apex not pointed; a line from highest point of convexity behind horn to lower margin of pronotum and parallel with vertical line of face and metopidium approximately one-third longer than a similar line made for *porrecta;* distinctly ribbed, one or more ribs following dorsal line of pronotum from convexity to apex; surface deeply punctate.

Tegmina typically with only one small discoidal cell.

Color varying from light brown with cream markings to dark brown with black and light-green markings; usually a small colorless transparent area in front of dorsal convexity and a smaller one behind. Abdomen dark brown to black. Legs light brown.

Male: Short rounded prominence in place of erect horn. In other respects similar to the female.

Type, ♀, Jiutepec (Xiutepec), Morelos, December 24, 1933.

Allotype, ♂, same locality and date.

Described from 23♂♂ and 17♀♀ taken January 1, 1932, and December 24, 1933, by sweeping tall, dry grass near Jiutepec, Morelos. Type, allotype, 10♀♀ and 10♂♂ paratypes in author's collection. Two ♀♀ and 2♂♂ paratypes in collection of W. D. Funkhouser.

Some females have horns longer than that shown (Fig. 16). The pronotal characters for this species are good and show that it is distinct from *porrecta*. In a series of 37 specimens, 33 had one discoidal cell, 1 had two discoidal cells, and 3 had none in the tegmina. Out of 74 specimens of *porrecta*, 73 had two discoidal cells and 1 had three discoidal cells in the tegmina.

Fowler's *porrecta* has never been figured and is given here for the first time. He stated that the pronotal horn was not a sexual difference (*ibid.*, p. 132), but all the author's material shows that only the female bears a horn on the pronotum. Funkhouser made a similar observation on the specimens in his collection from other localities. Most of the females of *porrecta* have a semicircular bright green area on the pronotum above the base of the tegmina (Fig. 19). This area becomes yellow in old specimens. There is no similar area on the pronotum of the male.

The short, rounded prominence of the male that replaces the pronotal horn of the female of *erecta* is constant in size and form, but in *porrecta* it varies considerably, as shown in figures 20, 21, and 22.

**Platycentrus ramosicornis** new species. (Figs. 23–25)

Close to *acuticornis* Stål, but less stout and smaller. Readily distinguished from *acuticornis* and *obtusicornis* Stål by the single prong on posterior face of each suprahumeral horn about 1 mm. from the apex. Length from front of head to tip of tegmina, 7 mm.; width between horns, 7.5 to 8 mm.

Head shining, punctate, not rugulose, very finely pubescent; ocelli nearer to each other than to the eyes; base arcuate at margins, the central half straight.

Pronotum with each suprahumeral horn straight, slightly curved and acute at apex, directed upward and outward on an angle that varies from that of *obtusicornis* to that of *acuticornis*, the apex as much as 1.5 mm. distant from a horizontal extension of the plane of the face and metopidium,

triquetrous, a single sharp prong on posterior face about 1 mm. from apex, rugose only on upper surface; posterior process slightly broader than in *acuticornis,* enlarged, with percurrent ridge and almost straight sloping sides, apex acute; punctate.

Color light to dark brown; large number of dirty-cream to gray-green callosities on dorsum of pronotum; distal half of suprahumerals dark brown to black with brunneous rugosities only on upper surface, rugosities at proximal end lighter in color; posterior process dark brown to black; pronotum finely covered with short yellow hairs; exposed portion of scutellum cream-colored. Black markings on margins of face. Thorax and abdomen light brown. Tarsi black. Tegmina translucent, brown marked with black; venation distinct.

Type, ♀.

Described from 3♀♀ taken on mesquite at San Geronimo, Oaxaca, by W. E. Stone, April 26, 1932. Type and 2 paratypes in collection of author.

## PLATE XXVII

*Ceresa mexicana*, n. sp.

Figure 1. Side view.
Figure 2. Dorsal view.
Figure 3. Front view.
Figure 4. Male genitalia and aedeagus.

*Poppea longicornis*, n. sp.

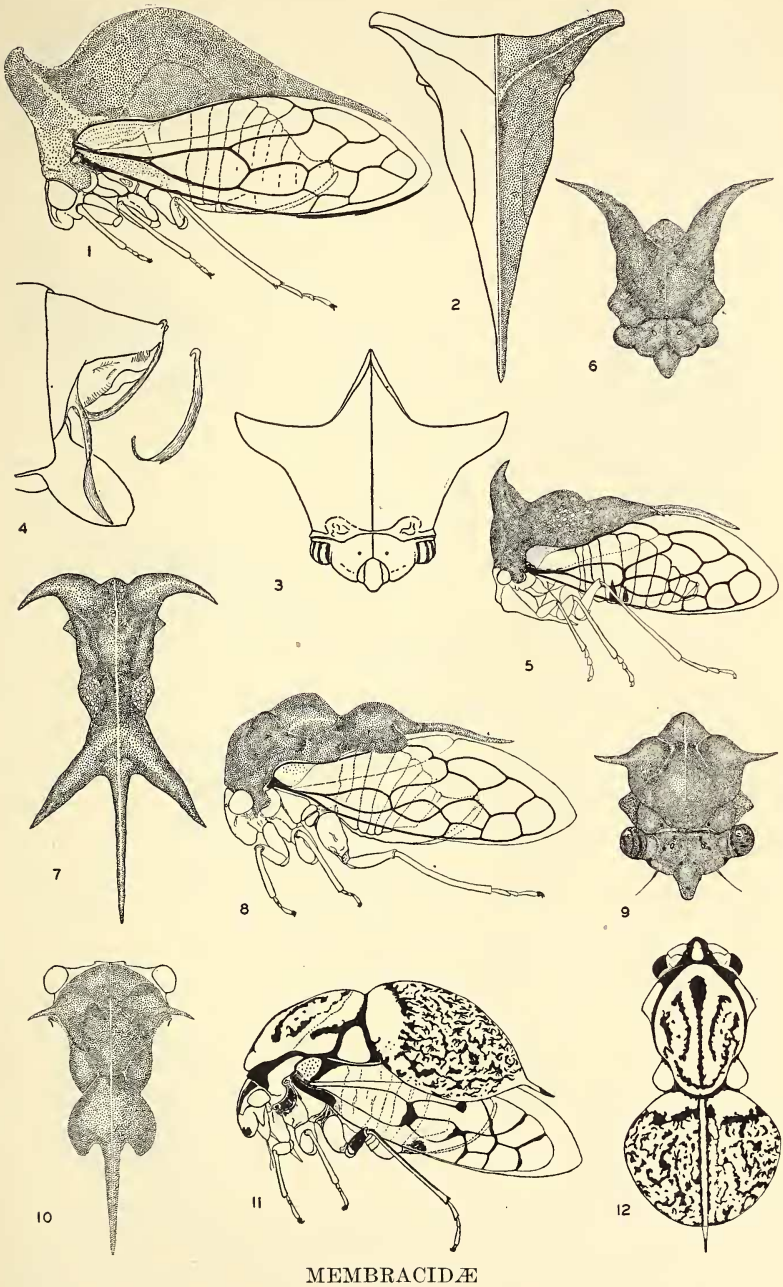
Figure 5. Side view.
Figure 6. Front view.
Figure 7. Dorsal view.

*Antonae evelyna*, n. sp.

Figure 8. Side view.
Figure 9. Front view.
Figure 10. Dorsal view.

*Parantonae ornata*, n. sp.

Figure 11. Side view.
Figure 12. Dorsal view.




MEMBRACIDÆ

## PLATE XXVIII

*Xolonia variegata*, n. sp.

Figure 13. Side view.
Figure 14. Dorsal view.
Figure 15. Front view

*Publilia erecta*, n. sp.

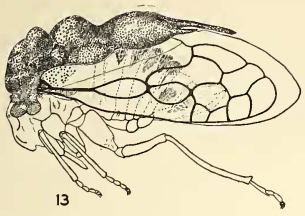
Figure 16. Side view, ♀.
Figure 17. Front view, ♀.
Figure 18. Side view, ♂.

*Publilia porrecta* Fowler

Figure 19. Side view, ♀.
Figures 20, 21, and 22. Side views, ♂ ♂.

*Platycentrus ramosicornis*, n. sp.

Figure 23. Side view.
Figure 24. Dorsal view.
Figure 25. Front view.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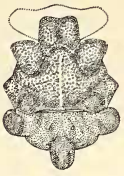
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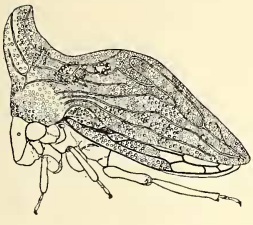
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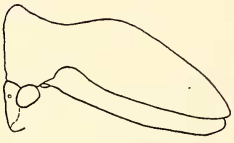
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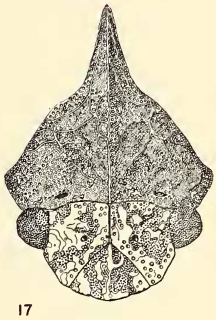
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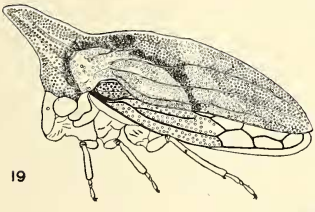
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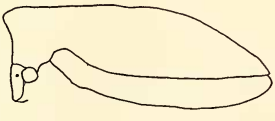
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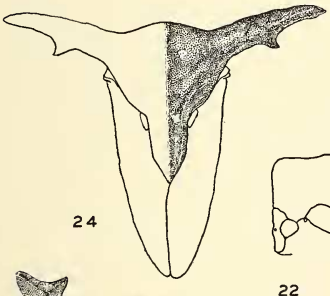
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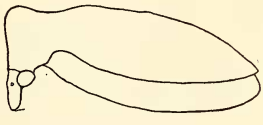
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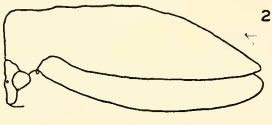
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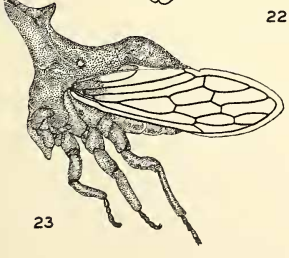
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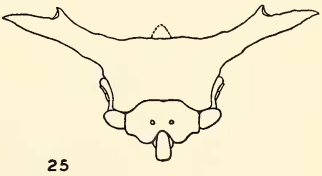
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MEMBRACIDÆ